

REMARKS

INTRODUCTION

In accordance with the foregoing, claim 12 has been amended. Claim 16 has been cancelled. Claims 1-15 are pending and under consideration.

CLAIM REJECTIONS – 35 USC 102

Claims 1, 3-7, 12, 14 and 15 under 35 U.S.C. § 102(b) were rejected as being anticipated by lizuka (US 6,643,044) (hereinafter "lizuka").

lizuka discloses a scanning optical system. In lizuka, the scanning optical system 1 is arranged such that a diverging light beam generated by a semiconductor laser 10 (light source) is collimated by means of a collimator lens 11. The collimated laser beam then passes through a cylindrical lens 12 and is converged only in an auxiliary scanning direction to form a linear image. The converged beam is then reflected by a flat mirror 13 at substantially a right angle, and is incident to a reflecting surface 14a of a polygon mirror 14. A principal ray of the laser beam incident to the polygon mirror 14 is included in an imaginary plane that also includes a rotation axis 14b of the polygon mirror 14. This plane is defined as "an auxiliary scanning plane". lizuka, 4:66-5:11 and Figure 1.

Further in lizuka, the polygonal mirror 14 rotates at a high speed, thereby deflecting and scanning the laser beam. The deflected laser beam is then reflected by a curved surface mirror 15 (a first anamorphic optical element) back in the direction of the polygon mirror 14 (but either above or below the polygon mirror 14) and transmits through an anamorphic lens 16 (a second anamorphic optical element). The laser beam transmitted through the anamorphic lens 16 is reflected by a fold-over mirror 17 and forms a beam spot on a surface of a photoconductive drum 18 (i.e., an object surface). As the laser beam scans through a scanning angle, the beam spot scans through a scanning area moving in a main scanning direction parallel to a generatrix of the photoconductive drum 18 as the polygon mirror 14 rotates. lizuka, 5:12-5:25.

Claims 1 and 3-7

Claim 1 recites: "...a plurality of photosensitive drums..." In contrast to claim 1, lizuka only discloses a single photoconductive drum 18 rather than a plurality of photosensitive drums as is recited in claim 1.

Claims 3-7 depend on claim 1 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

Claims 12, 14 and 15

Claim 12 has been amended to include the allowable subject matter of claim 16. Claims 14 and 15 are dependent on claim 12 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

CLAIM REJECTIONS – 35 USC 103

Claims 9 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over lizuka in view of Plotkin et al. (US 6,222,663) (hereinafter "Plotkin").

Plotkin discusses a high duty cycle scanner for a laser printer. The electronic printer system 11 with a polygon scanner 12 of Plotkin includes a data matrix 13 which is used to modulate the beams of a multiple beam source 14, such as an individually addressable monolithic LD array or a fiber optic array coupled to individual laser diodes. The modulated beams are sent through an incoming optical system 16, to scanner 12. The beams reflected from the scanner go through an outgoing optical system 17 to a drum 18 having a photosensitive surface.

Claim 9

Claim 9 recites: "...a first plurality of mirrors arranged with a second plurality of mirrors to reflect the plurality of beams of light deflected from the rotatable light deflector onto a plurality of optical lenses that guide the plurality of beams of light onto the plurality of photosensitive medium surfaces respectively, wherein a center of the optical lenses is offset from a plurality of axes corresponding to the first and second plurality of mirrors." In contrast to claim 9, neither

Iizuka nor Plotkin discuss a plurality of photosensitive medium surfaces. Both Iizuka and Plotkin only discuss a single photosensitive drum.

Withdrawal of the foregoing rejection is requested.

Claim 13

Claim 13 is dependent on claim 12 and is therefore believed to be allowable for at least the foregoing reasons. Further, claim 13 recites features that patentably distinguish over Iizuka and Plotkin, taken alone or in combination. For example, claim 13 recites that the reflector includes a first mirror and a second mirror, where the first mirror is disposed to receive the beam of light from the light deflector and reflect the beam of light to the second mirror, disposed to receive the beam of light from the first mirror and reflect the beam of light onto the optical lens.

Withdrawal of the foregoing rejection is requested.

CLAIM REJECTIONS – 35 USC 103

Claims 8 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Arimoto et al. (Applied Optics, Vol. 30, No. 6, pp. 699-704, published February 20, 1991) (hereinafter "Arimoto") in view of Demeritt et al. (US 5,274,502) (hereinafter "Demeritt").

Claims 8 and 10 are dependent on claims 1 and 9, respectively and are therefore believed to be allowable for at least the foregoing reasons. Further, claims 8 and 10 recite features that patentably distinguish over Arimoto and Demeritt, taken alone or in combination. For example, claim 8 recites that the scanning lens is an asymmetrical aspherical plastic lens.

ALLOWABLE SUBJECT MATTER

The Applicant acknowledges with appreciation that claims 2, 11 and 16 have been found to contain allowable subject matter. Regarding claims 2 and 11, in view of the foregoing it is respectfully submitted that claims 2 and 11 are allowable in their present form. The allowable subject matter of claim 16 has been added to claim 12. Claim 16 has been cancelled.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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